

# 8BIT

## THE MAGAZINE FOR ALL 8-BIT COMPUTER USERS

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### EDITOR'S COLUMN - ISSUE 17

Welcome to issue 17 of 8BIT; the second part of the pair which began with issue 16. This one has no adverts (apart from the back page) and therefore is a fairly jam-packed wedge of text on 8-bit computing.

I hope it's not too 'dry' without the usual visual breaks of the display ads and columns of news and 'shorts'. If you *don't* like it, take comfort from the fact that it's back to the usual mix with issue 18: there's still a lot in the files to ensure that the editorial side continues at a high standard to the end of the run.

In this issue there are a couple of articles on topics which have been covered before from another computer user's point of view. I do hope the reprises shed new light on the subject. I think it unlikely 8BIT will go round these same tracks again.

At the beginning of August 1997 Amstrad plc will cease to exist, as such. But before all you Commodore and Spectrum users start throwing your hats in the air, hear me out.

In a brilliant stroke which shows wily Alan M Sugar hasn't lost his sweet (ouch!) touch in business, the assets of Amstrad, including the staff, will be transferred to Betacom, another company in the Amstrad family. I wish I could sell myself something I already own and show a profit on the deal.

Mind you, that's probably why he's got what he's got and I've got what I've got.

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Normal Service, including Small Adverts, Display Adverts, News Items, The Shorts, etc Resume in the Next Issue of 8BIT.



## THE CPC AND MILLIONAIRES by 'SAM'

This article appeared in an amended form in the CPC group WACCI's monthly magazine. It is reproduced with their, and the author's, permission. It quotes the CPC range, but the points it makes about bargaining over the features of any computer are generally relevant - BW.

As you may have guessed from the title, this article is about making money from your CPC. But this is not a simple review of the latest accounts package, or pools predictor. No, I'm here to open your eyes to the wonderful world of business - dealing in computers. Not just selling the odd game or serious program at car boot sales for £5, but the thing itself.

Obviously, it's an good idea not to sell the one you mainly use, or the one that's in the cupboard under the stairs - it's best to have a spare computer in case your main one goes wrong. This means that we've got to buy one first.

Most people have a local paper that carries free advertisements. Read the general and computer sections looking for anything that *might* be a CPC that is very cheap, ie under £25 for a Plus or 6128 or, if you're very desperate, under £10 for a 464. It is better to go for a colour monitor, with a 6128+ or 6128. Some put very strange adverts in, like 'GX road racing game. Plugs into TV. £5!!' Obviously, whatever you are buying with a view to resale, you need to make yourself aware of what sort of price your chosen computer will actually fetch when sold. This is often a *lot* less than the first asking price. If you ring up and find that you are too late and the computer has already been sold, always ask what price it went for and keep a file of notes so that you know the real market price of the various models in your chosen computer's range.

These prices sound stupidly cheap but I have picked up:

- 1) A 6128 keyboard for £15 - picked up by Dad at a car boot sale.
- 2) A 464 (green screen), an MP-1 modulator and games for £15 - spotted in my local free ads paper, and sold with 40 tape games and a joystick for £52
- 3) A 6128 and colour monitor and games for £25 - purchased after I placed a wanted ad for a 6128+ in the paper.
- 4) A 6128+ and mono monitor and games for £25 - purchased resulting from the same ad. I thought the price I had stated was £30, and I offered them £25 as it was mono. Unfortunately a misprint had lead to the price being offered becoming £20!!

I bought a 6128+ with a mono monitor, which should have make it difficult to sell for a huge profit. However, I flogged it at a car boot sale for £35 - I wouldn't normally have gone for only a £10 profit, but it had a mono monitor, and I sold some discs I got with it for about £20, and the two CP/M operating system discs for £15! (I showed my customer an old WAVE (alas, now closed) ad in Amstrad Action (also deceased), selling CP/M discs for about £15 each, to justify my price).

When I bought the Plus, I took £5 off the price I thought had been printed, which you should do if people are offering stuff that you didn't ask for, i.e. a CPC when you wanted a Plus, or a mono/green monitor when you wanted colour. Alternatively, say that you don't want it, and wait for someone who's got the stuff you asked for - they will have, don't worry.

You may not find anything advertised for such a price, so you've got to place a wanted ad. I'm not certain whether you should place it in the 'computers' or the 'wanted' section, but I always use the 'computers' one myself, with an ad like this:

'WANTED: Amstrad 6128+ with colour monitor and games/accessories and manual in vgc. Will pay £25. Tel: (PHONE NUMBER and TIMES)'.



Always ask for a manual and games, so if people don't have over 30 of them, you've a reason for offering a lower price than what you asked for in the ad. Of course, if they don't accept your new offer, take the thing anyway!

So, someone's phoned, it's what you wanted, and you go to collect your new computer. This may sound obvious, but don't buy it if it's damaged, or there is obviously a serious problem with it - take some games and peripherals to test on it.

Let's go on to selling. As an example, the way to sell a GX4000 (games console version of a CPC Plus) would be an ad like this, 'GX4000 console, 4096 colours, stereo sound, plugs into TV/monitor, cost £80, sell £30, vgc. With free game and controller. Tel: (PHONE NUMBER and TIMES)'.

Quick explanation:

Start with the name of the computer. If it's a CPC Plus, say that it's got 4096 colours and stereo sound. A GX4000 doesn't come with a monitor, so cover that. But don't say, 'does not come with screen' as it sounds like a minus point, whereas 'plugs into TV' will usually be a plus point. Say that accessories are 'free' as opposed to just listing them after writing 'with':

'CPC6128, colour, stereo sound, 30 free disks of your choice, joystick, manuals, vgc, only £60' is much better than: 'CPC6128 with 30 games and joystick, £60'

Now the price, and my arguments:

Should you include the price? The obvious answer is yes, but if you don't include it, then it's going to encourage people to phone and enquire. When they do, ask them how much they were expecting to pay. Always aim about £10 higher than that, unless they were offering an exceptionally high price, or a stupidly low one, preferably about £30-£40 more than you paid for the machine - about £50-£60 is about right for a 6128 or Plus. Always negotiate! If you do state the price, you'll only get people phoning who will go to that price, and there might not be that many. It's up to you.

Let's assume that someone has phoned, and someone is coming to see your computer, or has said that they will phone back. DON'T GET EXCITED. I reckon that there is only a 25% chance of them turning up or calling you back.

When the doorbell rings, shove the visually impressive THE DEMO into your CPC, and get it on to TURN DISK DEMO SIDE A for adults (those skulls are amazing), or the 3D vector balls part of the FACE HUGGER MEGADEMO if you reckon kids might be scared by those brilliantly drawn skulls opening and shutting their mouths. Oh yeah, turn off the awful reflection with R for those vector balls. If your CPC is connected to stereo speakers, turn on the sound, otherwise, don't bother.

Casually mention the amazing capabilities of such an old machine before resetting, and talk a bit about the CPC. Load up something like EXOLON to let them marvel at those graphics (cheat by typing ZORBA into the key definitions screen), or some other game with amazing graphics such as MegaBlasters, and mention that the CPC version has more levels and is better than the SNES original. Show them a manual (only the front cover preferably - don't let them read it!)

When they say they want it, have everything ready to go and give them everything, and don't forget:

- \* the keyboard
- \* software and accessories
- \* 8BIT's phone number (01353 777006)
- \* ask them for the money. Remember cheque cards have limits, and the number which needs endorsing on to the back of the cheque
- \* the monitor
- \* the joystick
- \* a contact number for a good user group



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## MODIFYING A 3.5" DRIVE FOR AN EINSTEIN: by Stephen Potts

INTRODUCTION BY BRIAN WATSON: Most 8-bit computers can use an external 3½" drive B:. This article covers some of the details encountered fitting one to an Einstein.

As you will see we have resolved how to use almost any 3½" drive without complicated mods and we can use the standard DOS that comes free with each microcomputer.

3" disks are now scarce and expensive so one answer has to be a 5¼" or a 3½" drive. This may have meant worries about which DOS or format to use. With this in mind I have made a modern disk drive behave as the 3" one with "A" and "B" sides. If you choose to use 'large format' systems they can be added at a later date.

- 1 The drive can be any 3½" or 5¼" and can be either self powered or not. For ease I have used a CUMANA self powered drive from a BBC. The way to tell it is suitable is the mains plug for the 12/5v transformer and the 34 way data/ribbon cable.
- 2 The ribbon will usually have no 1 marked and the rest grey. If we take the top off we will find the ribbon goes directly to the drive unit and the power is on a separate 4 way plug. The pin layout is a Shugart standard as on page 222 of the Einstein manual. Looking at the pins the lower are all earth or ground so we only use the top row.
- 3 Plug a 34 way IDE connector into the port at the Einstein's rear and switch on the drive, then the computer. With your working copy of the master disk use the appropriate utility to format a new disk in the new drive. This will be as 1 on a single drive and 2 on a double drive Einstein. Drive Select is usually on 1 but can be changed with a switch or jumper connectors, counting 4 drives as 0 1 2 3. If there is a 40/80 switch leave it on 40 - it really doesn't matter at all.
- 4 Now we have a disk with side A formatted but how can we format side B? We *could* buy a new DOS system or try mucking about in Einstein's brain MOS. Like me you may want to make life easy and use two 3½" disks to backup one 3" disk, calling one a and the other B. ie two 25p disks instead of one £2 one.
- 5 The way I found from various bits of information from old computer books relies on the fact that if line 32 is grounded the disk drive uses the second head on the other side of the disk to read/write. If on the 34 way data cable the odd numbers are 0v all that is required is to connect to the next line and fool the drive into thinking that the disk controller chip is at ground (0) not +5v (1). This is very easy as the Einstein doesn't use pin 34 drive already as on Amstrads or PCs.
- 6 Inside the case I have cut three strands opposite the no 1 line. Line 34 is not used, line 33 is ground - it *could* be used but I preferred to ground at the drive case. Lastly cut line 32 - the lines are soldered to extend them. Take the end of line 32 that goes to the drive and solder it to the centre pin of a two way switch. The end of line 32 that goes to the computer is soldered to the bottom pin. Finally the ground line goes to the top pin.  
  
My switch is mounted to the left of the disk slot. I would recommend using a rocker type as it is less susceptible to damage. Best is a double pole double throw rocker switch with six pins set out like a domino with no connection between throws. Flipping the switch is now the equivalent of turning the disk over.
- 7 You now have a working side-switch for about £3 and use most software without any special software or tricks.
- 8 If you use special DOS systems these will still work with the switch in the A position.



## THE MINI-OFFICE WORD PROCESSOR (REVISITED AFTER 6 YEARS)

The Mini-Office II suite, published by Database Software for most 8-bit formats, has often been scorned in the computer press, but it still offers good value for money and has many features to help first-time or inexperienced users of software. It was one of the first programs I bought and, although I moved on to CP/M Protext as my choice of word processor because of its fuller features, experience with MOII gave me a good foundation in the use of key combinations to achieve effects within my text. It also taught me to look for alternative ways to achieve the effects in case a special situation required a particular solution.

In goes the MOII disc and I am immediately reminded that by typing RUN "word <RETURN> I bypass the opening menu and get straight into the module I want. In my manual, this is explained for tape users but left for disc users to discover!

There is no way without a disc editor to preset the values used by the MOII printer drivers such as the margins, character-width, font set etc. as there is in Protext (in any of its versions). So if you want to use your customised sets of margin values and so on you need to use one or more templates to do the job. I have written about these some time ago but at the risk of boring long time readers I will recap.

A template file is a blank, or partially filled, text file designed to be the basis for more individualised files. For example, you may create a file to be saved under the title SINCEHEAD (not scinhead!) which contains (1) your name and address, (2) a line starting "1995", (3) a line starting with a TAB and "Dear ", (4) some blank lines, then (5) the words "Yours sincerely,", (6) a few more blank lines, and lastly (7) your name. The same file but with "Yours Faithfully," near the end might be saved as FAITHEAD (not fathead). As MOII insists upon putting .DOC at the end of all text files you only have control over the first eight characters of the filename, but a bit of forethought can still come up with some useful mnemonics.

In addition to this standardisation you can embed printer codes to control the look of your text when it is printed out. This depends on your printer, of course, and the facilities it has. Check your printer handbook.

I remember I used to get very confused trying to embed codes, yet still keep text in the right place on the page. Early versions of MOII do not print out printer codes' entries (of course?) but what it *does* do is still send the spaces left once it has made the codes invisible to the printer. So the effect is to move along the text remaining on a line after an fl command, leaving a gap where the printer codes were!

For a clearer explanation of this, I suggest as further reading the article by John Hudson in WACCI number 82 for September/October 1994. Essentially, what John points out is that codes should occupy a line by themselves to avoid the "gappy line" effect. Printers produced since the two series quoted offer many features which can be similarly selected. For example, the lines above your top line of text might be used to set your header text style; also the top, bottom, and side margins, and the page length (though this is easier done by the PRINT sub-menus).

I prefer to have the main body of my letters in a slightly different font to that used for the "top and tail", being the address details and "Yours Faithfully," etc, so to do this in MOII the codes should be inserted in the blank lines left above and below the body text.

Looking at the printout of this article, which has been prepared in MOII then output through my bubble jet printer it is indistinguishable from the way it would look done by my Protext. There was more thought needed to get it that way, and I have chosen to use capital letters rather than italics to emphasise some points, but it works - and that's the main thing. Now all I need is a public domain spelling checker to use with it...



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## A BRIEF EXAMPLE OF HELP COMING FROM A NEWSGROUP

With all the enquiries which come in to the 8BIT office about e-mail, newsgroups and the Internet, it might be instructive to see what an extract from a typical newsgroup looks like. The one chosen to provide an example is comp.sys.amstrad.8bit.

[NOTES IN SQUARE BRACKETS WILL ATTEMPT TO EXPLAIN WHAT'S GOING ON]

From clive@mechcity.demon.co.uk Mon Feb 26 14:28:41 1996

[The posting by e-mail begins with the origin details of the enquiry. See note 1 below]

Subject: 8526....9512..Knackered ??.

[fairly self-explanatory]

From: "clive.r.sanham" <clive@mechcity.demon.co.uk>

[Clive gives more information about himself than his e-mail system does]

Date: Mon, 26 Feb 96 14:28:41 GMT

[the date, again]

Hi,

I've just got hold of two PCW's an 8256 & 9512, but, both of them, when inserting the system disks, just whirr for a little while and then beep at me. Am I right in thinking that the software is naff, or is it likely that the PCW's are bugged ?. Any advice would be welcome, plus if it is the software, where can I get replacements ?. Cheers,

--

clive@mechcity.demon.co.uk

=====  
Clive.R.Sanham - clive@mechcity.demon.co.uk (Demon Tenner-a-Month Account)  
Connecting via Demon Internet, Finchley, London, N3 1TT. Tel: 081-349-0063 -- Full  
IP Connectivity for a 10 UKP per month - no usage/online fees!! --  
[the previous couple of lines of "sign-off" stuff go out which each e-mail. This is  
usually used for advertising or some (allegedly) humourous quote such as, "I'm not  
as thunk as you drink I am"]

From Howard@locomotive.com Mon Feb 26 18:56:34 1996

[Howard Fisher of LocoScript Software gets on the case pretty sharpish - note the time]

Subject: Re: 8526....9512..Knackered ??.

[so we know what he's talking about]

From: Howard Fisher <Howard@locomotive.com>

[Further personal identification]

Date: Mon, 26 Feb 1996 18:56:34 +0000

[yes, yes, yes...]

Well, not the software, but maybe your copy of the software. Also, the version of the software for the 8256 is not the same as that for the 9512, so check you're not simply trying to use the software in the wrong PCW. Or it could be that the disc drive is in need of attention - many people in this news group can give advice here.

LocoScript Software (note the new name) can supply you with up to date software for both machines - our details are below, call us and we'll send you our 24pp catalogue



for the PCW. We also do a very nice 3.5" replacement disc drive kit that runs from the 12v supply for added reliability, software that adapts LocoScript to the faster drive head seeks etc and a design so you don't need to take a hacksaw to the case.

--

Howard Fisher + LocoScript + Tel +44 1306 740606 Fax +44 1306 885529 3 Havenbury +  
Station Road + Dorking + Surrey + RH4 1YL Sales e-mail: Sales@locomotive.com

From eljl3@dwalin.lut.ac.uk Tue Feb 27 11:02:44 1996  
[James Last, presumably *not* the German bandleader, joins in a day later]

Subject: Re: 8526....9512..Knackered ??.  
[see above]

From: "J.Last" <eljl3@dwalin.lut.ac.uk>  
[so, *not* the bandleader then, unless he's taking a music course in Luton...?]

Sounds like the disks you've got haven't actually got a EMS/EMT file on them - in other words, they won't actually boot the computer. You can get replacements from Locomotive Software (mail to: sales.turnpike.com).  
[such helpful people. If he's got a bit of a delay in his system he might have missed Howard's posted reply]

--

J.Last

**Note 1.** An e-mail address, used to post the message, generally comprises the following parts:

- (a) the individual's identifier, usually a name like clive, but it can be a nickname or a number, depending on the used
- (b) after the @ sign comes the "domain name", the actual e-mail postbox chosen by the user, in this case mechcity
- (c) the next 2 parts identify the service provider and its type - demon.co is a company called Demon, luton.ac is an academic site in Luton, salford.edu is the educational establishment Salford university. A special case applies if the site is registered in such a way as to *not* need to use Demon, Compuserve, CIX, AOL, or whoever. In that case the rest of the address may take a different form, eg, Locomotive.com
- (d) the uk suffix defines the country of origin. America, having invented the system does not use one.

**Note 2.** If the reply is of only very limited interest it is quite common for replies to be sent direct to the poster, rather than to the newsgroup. Sometimes a short version goes to the newsgroup, while a fuller version goes to the poster. Shameless placings of advertisements or detailed sales information are frowned on as they stretch the intention of the newsgroup system to be non-commercial in content. Frequent enquiries and the appropriate responses will be put in an FAQ (Frequently Asked Questions) and posters should try this first to avoid cluttering up the system with questions which have been asked before.

REPLY TO SUBJECT: RE: PCW 8512 INTERNET CAPABLE? [no other details recorded]

SCA are at 146 Ham Road, Worthing, Sussex, BN11 2QS, England. Tel: +44 903 821128 or Fax: +44 903 821120. As well as a high-speed serial interface which handles speeds up to 38,400 baud, they also supply other products like parallel ports and memory expansions. They sell two modem kits for the PCW: a slow 2400 baud one and a fast 14k4 one, both with a serial interface. The faster one has a special interface (normal ones only run to 9600 baud on the PCW) better software and fax facilities. I can recommend this deluxe kit as I have astounded friends by using a humble PCW to send faxes! The cheaper kit costs 169 pounds and the deluxe one 299 pounds.



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## CP/M PLUS - A PLAIN ENGLISH INTRODUCTION FOR BEGINNERS

If you bought an Amstrad CPC or PCW new, or added a disc drive to a CPC 464, you became the owner of a strange set of programs on disc designed to operate with CP/M, a different operating system to either the CPCs' BASIC or the PCWs' LocoScript. Elsewhere in this issue you will find reference to AlchNews, the publication principally aimed at Spectrum and SAM users, now having CP/M Plus for the Spectrum. If you run another 8-bit computer you may have found that a version of CP/M is available for your computer too, but generally only as an optional extra.

You might have become familiar with your computer's BASIC; the system usually supplied for you to write your own programs in a language with a set of commands quite near to English. CP/M is rather different: to write your own programs is a similar exercise to programming in machine code; not impossible, but a more challenging process than knocking out a 'ten-liner' in BASIC. But CP/M does have uses as a operating system basis for many helpful utilities and other programs and I will try to explain some of the easier principles here.

First, the almost obligatory short history lesson on CP/M. It was conceived by a Yank genius called Gary Kildall as a kind of 'universal' system to work on all sorts of computers, including home, business and scientific. Kildall was one of computing history's great 'nearly men' who *just* managed to miss out on Bill Gates' and IBM's early grabbing and subsequent domination of the world's computing systems. You may have heard of MS-DOS, one of the the PC's operating systems on top of which Windows sits. MS-DOS is a direct inheritor of CP/M's look and feel (although *of course* no copyright infringement is implied!) albeit rather more sophisticated.

By the time Amstrad did the deals with Digital Research to license CP/M for the CPC and PCW (and later the Spectrum +3?) ranges it had been abandoned by virtually everyone else in the computer world. PCW's don't even have CP/M built in as a default option; to use it you have to first put the CP/M disc in the drive, *then* switch on. The system then boots substantially from the disc.

So CP/M is a virtually-dead language (so much so that it has recently been put conditionally into the public domain) with no easy way to write programs for it? Well yes, more or less. *but*, and it's a big *but*, it does have features which make it useful. If you think of its programs as being like Lego blocks you can start to build some useful buildings. I'll abandon that metaphor now before I build myself a blind alley. While it may appear I'm straying off the point, if you are to become a full-blown CP/M bore you need to be able to come out with all this stuff in conversation!

Half the system is the same core of actions and instructions, the second half contains the translator to allow a particular computer to 'talk to' the first half. At heart it's really as simple as that. The earlier versions of CP/M which are still available (versions 1.4 or 2.2), are quite limited as it is designed to work within a limited memory of only 64k. CP/M v3.1, also known as CP/M Plus, is the smarter version to take advantage of memory sizes from 128k and up. So if you have a choice, and some owners get both versions supplied, use CP/M Plus. This article assumes we will be using CP/M Plus.

To create a CP/M 'working copy' disc to play around with you will first need to copy the original 'master' disc onto a blank disc. Note that I did say blank; the copying process will wipe all programs or other files from the disc you copy onto. This copying can be done with any utility which can copy a whole disc, rather than just the files off it, or if you're feeling brave you can use your original CP/M disc to copy itself.

In the latter case, put the master CP/M disc in your 'A' drive and load it according to your manual. There will be (*should* be) the usual buzzes and whirrs from the disc



drive and after a while you will see a CP/M Plus sign-on message at the top of the screen and on the next line an 'a>'. This tells you which drive you're working from and that CP/M is open for business.

The next step is to type 'diskit' (or some such similar command) and press <RETURN>. Note that you do not need to type the .COM suffix of the 'diskit.com' full file name. Virtually all CP/M program files finish in .EMS, .EMT, or .COM and you do not need to type any of the suffixes to run them.

From here on, you will be helped through the process by a series of on-screen messages. The keys you need to press to complete the copying are the f1-f0 keys on your keyboard and the letters 'y' and 'n' (for yes and no responses). The copying process will be quickest if you use two drives, but you can use just one, with or without another drive connected, if you don't mind swapping discs every so often. CP/M doesn't mind 3", 3½" or 5¼" drives and their discs to store text or programs.

The Point Of No Return is when you are asked to press 'y' to confirm the copying. At this point it would be a good idea to reassure yourself (a) that your *original* CP/M disc has its Write-Protect holes open and (b) that the disc you are copying to has its Write-Protect holes closed. Once you have completed the creation of a working copy, put your original CP/M disc away in a safe place for the first time you inadvertently wipe the copy. It *will happen* sooner or later so do not work with the original. At this point label the newly created disc clearly, and go and have a cuppa. You deserve it and I have written quite enough on CP/M for now.

If there is sufficient response to this article, I will return to the subject of CP/M and discuss creating a self-loading program which can easily (1) copy your choice of files from disc to disc and user group to user group, (2) make them invisible to a DIR or CAT command, (3) go a long way to protecting them from accidental wiping from your disc or (4) chop their heads off and send them to bed with no supper. Sorry, not the last one. I meant to say that the program you can create can erase files quickly and efficiently, but at the time of writing this I'm in our local production of Alice in Wonderland and I think the rehearsal schedule is getting to me.

## GOING LIVE

As from this issue, 8BIT is offering its subscribers a new service, and all it costs you is the price of an SAE.

Now that the e-mail (and Internet) system is up and running reliably, 8BIT can again access the various newsgroups which specialise in on-going, electronically conducted, conversations between enthusiasts for particular computers. Part of the etiquette of the thing is that the groups are not used for commercial purposes, and your editor doesn't have the time to post everyone's miscellaneous sales and wants (that's what 8BIT's pages are for), but for those who need help on a particular topic, where better to look for help than these world-wide accessible chat lines?

The way the system will work is this; a reader with an enquiry can write it out on paper and send it with an SAE to 8BIT. Upon receipt, the enquiry it will be posted in an appropriate newsgroup. One week later, or as soon as it seems likely that no more replies will be forthcoming, the answer(s) will be transferred to paper and returned to the enquirer in the SAE. That's it; simple, we hope, and effective.

There is just one more thing to decide, and that is which newsgroups to post the enquiries to. 8BIT's readers' experiences of the various newsgroups would be very welcome as the new service starts. I would prefer not to use the various World Wide Web sites as these cost rather more to access. Also it is intended that an article on the results and levels of helpfulness from the newsgroups used will follow.



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## SUPPORT THE C64 by Simon Hillam

**INTRODUCTION** by Brian Watson: This article has been in the 8BIT files for well over a year and much has changed since. I publish it now as the points it makes about the reasons for stagnation in *any* computer format's market are as relevant now as then.

Because of the (small) size of the 8-bit market now, it is simply not economically possible to make a living just from selling 8-bit products. *All* the suppliers now either cater for other markets or generic products such as disc boxes and printer ribbons, or they have another 'proper' job to pay the rent and fill the larder.

Two recent impending releases for the PCW and PcW16 are delayed due to the programmers' honest miscalculations as to how long it would take to get the job done properly, and 8BIT started getting calls complaining that ComSoft, the company handling the sales of both, were not returning calls left on the answerphone querying their non-appearance as expected. Because the proprietor of ComSoft is my partner in another business, I know the time burden (and cost) of responding to all these calls (often weekly 'repeats', I'm told) is quite disproportionate to any benefit to be gained, whether judged as potential sales value or public relations.

The number of enquiries I get which do not have *any* apparent purpose leads me to the reluctant conclusion that there are a lot of people with nothing better to do than ring up software companies and waste their time, then complain at any 'slippage' in the response. A little understanding would be nice. On with Simon's article...

Okay, I'll admit that the C64 (even secondhand) is about as likely to beat the Playstation or whatever in the Christmas sales this year than I am to getting stuck in a lift with Mariah Carey. However, that's no reason for you lot to ignore what's happening around you and let the C64 industry run itself into the ground.

I've no doubt by now that you lot are all aware of Jon Wells SupportWare Scheme and how it came about. No? Well Jon dropped out of the normal retail market because of the piracy problem and introduced a scheme whereby any number of outlets as well as Jon himself now supply his software as long as they do it entirely without profit. All you do is send him a tape or disk. If you like the software, you can send Jon some money; as much or as little as you like. Upgrades are notified as they become available, but only to registered purchasers. The thing is, how many of you, regardless of which computer you use, can say you didn't help just a little *tiny* bit to bang the nail into the normal retailers' coffin? The answer is unarguably an extremely small percentage of you, unfortunately.

I'll get to the point - people aren't buying C64 games or *anything else* for that matter and it's going to be the death of the companies who are willing to support us. I'm not quite sure what *your* problem is but I do know that yours are nothing to those of companies such as Electric Boys Entertainment Software, Psytronik and Visualize to name but a few of the many who are being affected. To put a finer point on it, if you don't get your arses in gear pretty sharpish, basically you can just forget about using your C64 altogether. The reason being that there won't be any software or support out there for you. You've got to do something about it *now*.

Russ Michaels from EBES says, "If people do not want games then there is no point publishing them. There seem to be very few users who have any interest in games at all. All sales in *general* are pretty dismal and with sales as bad as they are, it can only be a matter of time before we quit the C64 altogether" (they did - BW).

Jon Wells has some words to say too: "After Commodore Format" (*also* now gone - BW) "announced you could reserve a copy of 10th Dan in issue 53 I only received about 20 orders, which is quite frankly pathetic. Even if the CF readers each bought one copy of Escape from Arth at £1.99 a piece, that's not going to break the bank is it?"



And Kenz from Psytronik adds, "I'll just go back to PD. I just thought I'd try to give the public a bit of what they want, but obviously nobody's interested."

Is that what you *really* want? Jon to go and work on the PC and Kenz to scrap all future Psytronik products? Maybe you do, I don't know. The thing is though, I refuse to accept that you lot simply don't want new programs, although the C64 is primarily a games machine, the GEOS system makes it a very creditable 'serious' computer. No, there's some other reason for your behaviour and I think it's about time we found out what it is. The way I see it there are four possible explanations:

1) You are a pirate; in which case you're cutting off your nose to spite your face. It's like this; if you copy games for your friends then they (and you) are obviously not going to buy the original, which isn't doing you (or anyone else) any favours as it means that the companies producing these games are going to suffer from poor sales and close down. A few years ago you could get away with it, as there were plenty of users out there who weren't pirates and were willing to purchase an original copy. Now, it's not that easy. If you carry on pirating the small amount of new software, you'll have nobody else to blame for the death of the C64.

2) You are a stingy bar steward; if that's the case, then it's time that you opened your eyes, because not only are you missing out on some really top-notch goods, but you're also speeding up the demise of the C64. Now is that what you really want?

3) You think the games are crap; well you couldn't be more wrong. The vast majority of games from any of the above companies have been excellent, and just because they're not programmed by some big multi-national company doesn't mean that they're going to be lame. Besides, most of the european imports we're seeing (Saliva Kid, Lions of the Universe, etc) are commercial releases in Germany, so don't go making the assumption that they're just a bunch of flashy PD games, because they ain't.

4) You're worried about being ripped off; well I was, at first. I assure you every mail-order company that I have dealt with has either sent me the goods or returned my cheque if what I wanted was out of stock. You've got nothing to worry about.

So whichever category you fall into, you're wrong and that's all there is to it. There will be a small percentage of people out there (mainly pirates) who will just laugh and think they know it all but they, my friends, are exceptionally sad people and it shows.

I'm sorry if that was a bit heavy and not what a lot of you wanted to hear but the bottom line is that I'm not telling you how it *should* be, I'm telling you how it is. I wish there was no need for this article. At the moment the C64 scene is diabolical and that's why I hope you are prepared to do something to rectify the problem.

I don't need to say any more. What you need to do is get a stack of envelopes and stamps together and contact some of the companies that still support *your* computer. Once you're on the mailing lists, you'll have access to a large range of excellent software and be notified as soon as there is any new stuff available. There's no obligation to buy anything simply for sending them your name and address and a stamped, self-addressed, A4 envelope, but I can bet that once you see their lists you won't be able to get your cheques posted fast enough. The guide below should help you, so have fun; it's up to you - do it now.

#### The SUPPORT YOUR '64 Guide (recently verified by BW)

- 1) Psytronik Software (Jason McKenzie), 34, Portland Road, Droitwich, Worcs WR9 7QW
- 2) Visualize Software (Jon Wells), 9, De Grey Road, KINGS LYNN, Norfolk PE30 4PH.
- 3) PC Software (Paul Cresham), 61, Inverary Road, Wroughton, SWINDON, Wilts SN4 9DL
- 4) The fourth supplier, Electric Boys, closed down during last year.



LOCOSCRIPT on the PCW is the most widely used 8-bit word processor. Does the newest version deliver the goods as a credible upgrade? Two users report their experiences for the benefit of 8BIT readers.

LOCOSCRIPT 4 by Marion Butcher (Saturday 18 January 1997 16:30)

I'll begin by saying I've no previous experience of word processing although I can type and program a little in Spectrum Basic. I've never met Brian Watson's Protext program so this is a completely unbiased account.

I use an Amstrad PCW 8256 upgraded to 512k, with two 3 $\frac{1}{2}$ " disc drives and a LocoScript PowerPack added. I also have an Epson Stylus Colour 200 printer, which incidentally I found in a PC World sale for £100 less than LocoScript's version, though it was reduced because it was a returned unwanted gift (allegedly - BW). Incidentally, from LocoScript you have to buy the Printer Driver Disc separately, but it covers many makes of printer and uses up most of the 720K on the disc. You do get a ready adjusted LocoScript 4 Start of Day if you buy their printer, though. More about this later.

I'll straighten out a few points first about LocoScript 4, then tell you about the fun I had...

The 'text in columns' feature was fun to try, and the result seemed good when you eventually got it, but it was very slow. I had expected the layout of the page to be committed to memory and printed without hesitation, a page at a time. Instead I was treated to firstly a very long wait, a short strip of printing, another very long wait, and so on. This was disappointing for my faster printer. As for the number of columns, being restricted to A4 portrait width paper (or thereabouts) would not demand more than the four columns offered on LocoScript 4, so I'm happy with that. Using a set of layouts, you can use varieties of columns down the page, but layouts at present are not my strong point as I'm still learning.

The amount of memory used? Well, try this: I put everything I had onto one disc, this included the maximum 15 fonts for the Matrix, the five integral fonts in the printer plus four extra ones for the Stylus, LocoFile, LocoMail, Locospell, and some additional settings for different sized paper/cards. In other words, all the information on the disc would cover everything I needed for both the Matrix and the Stylus printers, whichever I chose. I was then left with a mere 76K in the memory to manipulate documents, out of a total of 1024K. I decided the best thing would be to keep the disc as a backup, or alternatively to experiment with styles of text for display purposes.

Printing all the evens and then all the odd pages is an extra feature for the program, and do not replace the consecutive numbering already present in LocoScript 3. Having had my new printer jam up a couple of times, I'm rather pleased about that!

Colour changes are by now a very sore point with me, and I am about to send to LocoScript to analyse the fault. Explaining all the details here would be superfluous, but here are the basic facts. The illustrations in the LocoScript Catalogue are mock-ups, it explains, of what LocoScript 4 can achieve. The illustrations are certainly no problem, as no more than one colour makes up each line. There were no restrictions given in the manual which came with LocoScript 4 Release 1, and I was delighted to find that several colours could in fact be printed in one line. Then the rot set in...

Firstly, I already knew that the PowerPack was a bit unsteady, and the Stylus was connected to this. So when I got some bugs in my colours I naturally assumed that the PowerPack was the sole problem. I secured it and steadied all the cables, making



sure that *nothing* moved at all from the time the system was switched on. I was a bit disappointed to find that letters no longer appeared in bicolours, as this had been a good effect, but the other most undesirable fault still occurred. Some colours are composite colours as you know, which require several passes. For some reason, the different colours did not overlay each other on the same word, but were printed in entirely different places along the line. So my home-made WARNING notice which was intended to be stuck onto the computer to inform the kids to switch on the printer before the computer in case of crashing the program etc., was a most appropriate bodge-up which really did appear to mean what it said! Unfortunately the PowerPack is the only means of attaching the colour printer, so I cannot remove it and test for colour without it! Until I hear from LocoScript, I cannot be sure of the cause. The one saving grace is that, whatever the colours may do, if the colour option is turned off and black used on its own, the bugs do seem to lie low. They *have* to be "Colorados"!

LocoScript have been very busy lately: that might explain what happened. *There* was the LocoScript 4 Master Disc. *There* was a LocoScript 4 Start of Day (not for the Stylus, but for the Matrix printer). Or so it said on the label... I needed a proper LocoScript 4 Start of Day, and I at last had the Printer Driver, so out with the instructions. "Insert the LocoScript 4 Start of Day disc". I did. "Not compatible with the system". Eh what? Good start. Check the disc. The label clearly said it was for the 8256/8512/9256, for the Matrix. I reinserted my faithful old LocoScript 3 disc and examined it. Not a "D" font in sight, all "G"s. "Inkjet" and then - "9512". Clearly useless to me. Being rather desperate to make things work, as I'd been waiting for weeks already due to a delayed order, I ran a CP/M disc first instead, which seemed to get things going OK, but I didn't know enough about the software to be sure. Then I rang LocoScript offices. "It must be your hotch-potch of a machine," was their first reaction, then, "well, you can make your own Start of Day anyway so it doesn't matter if it doesn't work, does it?". I suppose it was the modern version of "There's a hole in your bucket, dear Liza, a *hole*!" but after a while I think it sank in and they believed me. They said they'd send me another. I posted theirs back, with an explanatory letter, and next morning a nice new disc arrived - which *did* work. So did *another* one, two days later!!

I was very pleased to get LocoMail and LocoFile cheaply on a special offer, until I discovered why! I think LocoFile works OK as it deals with data files, not documents, but as explained in the LocoScript 4 booklet LocoScript 3 documents cannot be used with the LocoScript 4 Start of Day until converted to be '4' documents. This is easily done, but they cannot then be converted back into LocoScript 3 or used with a '3' Start of Day disc. The ridiculous situation for me is that I sent back my Loco 3 Master Disc to obtain '4' at a discount. The whole collection of files on my LocoMail Master Disc is in '3', and each file has to be converted individually. Of course I can retain all individual files if I'm careful to *copy* them, as converting a Master Disc seems rather foolhardy! But what is the point of leaving them all as '3's when I've no LocoScript 3 Master Disc? Why didn't LocoScript point out this problem in their catalogue before I sent for it? Similarly, the Lindex program is not compatible either, in that it also is only geared up to LocoScript 3, and will not recognise LocoScript 4 documents as more than a LocoScript ?, although it will still do the rest of the job. Pictures with LocoScript 4? I can hardly wait...

I am slightly deaf so, as I cannot go out as much as I would like, I am having a concentrated course on computers - all self-taught of course. Whoever said computers were labour- and time-saving? Wot a joke eh! says Paul! I haven't sent discs as letters through the post before. It's not put into columns because you probably can't wait that long either.

Hmm. That's one person's experience; rather adversely critical. Eager to maintain a balance, we present another point of view (with comments from a non-user).



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LOCOSCRIPT 4 - Release 1 - reviewed by Gary Jenkinson, with interruptions by Brian Watson

With regard to the recent article in 8BIT regarding LocoScript 4, I have much pleasure in telling you of my experience of LocoScript Software's latest update to its PCW word processing package.

Although the improvements of Release 1 represent useful extras, those of Release 2 promise to be much more so. I, for one, can't wait to be able to load graphics images into my LocoScript documents. But there are problems with this first release.

The first I've encountered is not so important, in that it doesn't affect the actual working of LocoScript. However, I find it rather unsettling. The automated 'document conversion' routine for changing LocoScript 3 files into 4 format doesn't work as it should. With LocoMail files the reverse video highlighting is largely (*largely? - BW*) removed and the distinction between code and text is therefore eradicated. Also some of the characters change shape, although not their function. For example, I have a LocoMail program which uses a 'not equals' sign which has been converted into a 'open smart quote'. However, as I say, the functioning of the program is unaffected, and not all the signs are similarly altered (*a little confusing to the user, I would have thought? - BW*).

The 'open smart quote' is also changed - this time throughout the document - to a quite different sign. This effect disappears as one scrolls down the document, when the correct (ie, wanted) character appears on screen, as well as in the printout.

Similar problems are encountered when using LocoSpell, [CUT] and [COPY]. All of these features produce what seem to me to be random reverse video effects which, although they don't affect their functioning, can be rather unsettling for those of us who're concerned about data integrity.

Sadly, text files from LocoScript 4 do not export successfully into MicroDesign 3. (*If you can still 'export as ASCII' from LocoScript 4, do that; it should work. Plan B: use Protext to prepare text for MicroDesign, as recommended by LocoScript - BW*)

I've so far discovered one genuine bug in LocoScript 4, which does affect its operation. If you try to exchange layouts, you cannot abandon this procedure as the 'Abandon Layout Exchange' menu option works exactly the same as the 'Leave Layout As It Is' selection. You have to press [CAN] to successfully 'escape'.

I cannot comment on LocoScript 4's colour facilities as I don't have a colour printer.

Your concern about altering the numbers of columns within documents is unfounded (*I had suggested that one might not be able to change the number of columns used, once selected - BW*), as the letter accompanying this review clearly demonstrates (*yes, fair enough - BW*); and one can select whether or not to print odd or even pages first or last. Using columns has an impact on the amount of time a columnated document takes to print - it takes longer. (*I hear from another source that the screen display shows first column one, then the next, and so on - BW*) Also, there's a problem - noted on both pages of the letter I have enclosed (*massive text corruption, actually - BW*), which I can't explain. These are lines which wouldn't print properly no matter what I did.

To sum up, it would almost appear as if LocoScript Software have produced LocoScript 4 (Release 1) as a test bed for bugs which can be reported back to them in time for the sale of Release 2? Or maybe they're testing the market to see whether or not it's really worth updating the product at all? Or maybe they thought it a good idea to produce a rush-release in time for Christmas? (*You might say so, I couldn't possibly comment - BW*)



## THE PCW16 PAGES by Brian Watson

I have recently had lengthy e-mail communication with Cliff Lawson at Amstrad who has consented to those conversations being made public here. As someone very closely involved in the development of *all* their 8-bit computers his thoughts on their new PCW16 and the state of the 'first time buyer' market are of probable interest to all readers. I have edited and reorganised the text to bring coverage of similar topics together but have aimed to preserve the original meaning of it all.

### ON HOW THE PCW16 IS PERCEIVED BY EXISTING PCW USERS

BW: I don't know how many other club/user group publications you get sent but the general opinion of existing PCW users is that it is a step backwards because of (1) no CP/M (2) a much slower word processor (3) it won't run old PCW software.

CL: It may be *perceived* as a step backwards but in terms of marketing (as Dixon's sales show) it is a step forward. The old PCWs with their character-based editing system may be fine for people enshrouded in the mists of computing folklore but these days your average punter expects whizzy interfaces (mice, menus etc) and to see on the screen what he is likely to get on paper. In 1997 you cannot get away with trying to sell something that looks like it was designed ten years ago ('cause it was!). Things like Win95 and NT4 have educated end users to expect more from their new personal computers.

BW: The '16 is not aimed, it seems to me, at existing computer users; it's aimed at new ones, just like the old PCWs. And it's the best of the line, no contest.

CL: Got it in one - I agree that people coming from the old PCW which was more of a "tech heads" machine will probably see the '16 as a step backwards but, like you say, that is not the primary market target for the machine - it is computing neophytes and for them it presents a far more "cute and cuddly" feel than something sitting there saying "A>" or even showing the Loco disk manager screen (sorry Richard!). As for running previous PCW software and CP/M - again the trend these days is away from command-based operating systems to things more like Win95 where all the system tasks (file copying, disk formatting, etc) are achieved in a more user-friendly way. You can't nowadays expect my Auntie Maude to understand the parameters of a PIP command!

I know that at the end of the day a lot of people might say, "WYSIWYG, so what!" and that they'd prefer an older fashioned text based system like previous PCWs but with more power and functionality. But that's because they've used the older system and expect something new to be similar but with even more features.

However, the PCW16 is aimed at novice users and we think that the "modern look" and ease of use that 95% of users will benefit from are far more important than highly technical features that only 5% of users might use. Of course the typical reader of 8BIT is going to be someone who is dedicated to PCWs and has stuck with them through thick and thin when, if they're that dedicated in actual fact, they'd probably be far better going for a modern Windows based word processor and machine.

### ON THE CHALLENGES OF PRESENTING A MODERN STYLE ON A Z80 COMPUTER

CL: The downside of trying to present WYSIWYG (What You See Is What You Get - BW) is that it takes huge amounts of added processing power. This is why we put in a 16MHz rather than 4MHz processor, but the fact is that trying to draw characters bitwise in variable fonts and do all the maths to work out their on-screen x,y positions is astronomically more complicated than a system that uses 8 by 8 fixed character cells. Running MicroDesign 3 on an old 4MHz PCW gives you a flavour of this and it doesn't even offer character placement in real time.



Consider, for example, something as trivial as deleting the last character you typed. In the 8 x 8 world you just zap the box and shuffle everything that follows back up to fill the hole. In the WYSIWYG world you have to work out which font, size and style the character was in and then try and calculate how many pixels it was occupying on the screen. You then 'block move' everything that follows back to fill the whole but you don't know how many, if any, characters from the next line can now fit on the end of the current line so you have to work your way from this point onwards, doing width and height sums on all the characters that follow to see how they format backwards, and as you get to the end of the screen you may or may not now have opened up a space to accommodate the next line which must be drawn with (possibly) some part of the bottoms of the characters clipped so that they don't wholly fit on the screen. In the character-based editor I'd guess that maybe 5,000 instructions were executed to delete the character. In the WYSIWYG world it's more like 50,000. This ten-fold increase in complexity applies to virtually everything you do in WYSIWYG.

We could have done a text based editor (perhaps even LocoScript) but our market analysis showed that what people expect these days is a graphic editing system. When we started we had considered lots of other goodies such as BMP/PCX graphics with text flow, landscape editing/printing with a sideways scrolling screen, multiple columns etc, but as the project progressed we had to get ruthless and throw all those things out because just the base task of writing a WYSIWYG word processor is so immense. The software in the PcW16 represents about 15 man years of effort which is a lot of development effort - believe me!

(another conversation brought up mention by Cliff of a "John", whose name was not familiar to me in the context of the '16)

BW: Excuse my ignorance, which John is this?

CL: John Robertson - he's head honcho at Cirtech, the leading designers of add-on bits for PCWs. In fact he was involved with us in the 16 design. He wrote some of the disk BIOS as he has a licence to fly 765 disk controllers. The majority of the DOS was written by Dave Hampson at Ranger who are also famous for Z80 design work (they wrote the DOS in my NC200).

#### ON THE POSSIBILITIES OF WRITING/ADAPTING "3rd PARTY SOFTWARE"

BW: I would be very pleased to receive the programmers' guide information from you if there is more to know than the ROSAN.DOC file which I understand is freely available from your web page. And thank you for the offer.

CL: Nope, I think ROSAN.DOC tells you absolutely everything you need to know about writing programs for '16 - we just gave that to several external contract programmers and with no other information they were able to write some pretty full featured code. (The diary is one example of this).

BW: I did talk to Nik at Creative just pre-release and got the distinct impression that the development kit Psyq was the ONLY, not the only SENSIBLE, way to develop software for the '16, and the cut that he wanted from any software sales struck me as disproportionate. I am not a software developer, but I have an eye for business, and the sums just did not make sense from our point of view. If there is a way to make it more economically viable, I'm interested again.

CL: To my mind the only cost effective way to write software is to use the Psyq system. I did, as an experiment, dig out a copy of a shareware Z80 assembler I use (Tasm - Table Assembler, not to be confused with the Borland product) and have written very short programs using only that which runs on a PC but outputs Z80 code that can be executed as a .PRG on the '16. However the downside of using that (or



anything else that isn't Psyq) is that you don't have any debug tools so you'd have to write a simple DDT/SID/Debug clone before you could really start on anything else and anything you did write like that is only going to offer about 10% of the functionality in the DBUGZ\*) that is within Psyq. In fact when I used Tasm, I cheated and used the debugging part of Psyq to find out why my programs weren't working. Without Psyq it would be a bit like a surgeon operating through a letter box. I know that Psyq costs a few hundred quid (mainly for the card that bolts onto the bottom of a '16) but the fact is that if a programmer costs you £200 per day (which is extraordinarily cheap!) the system pays for itself when he saves the first 2-3 days. Like I said there really is no point looking at anything else. Of course, if you are some guy hacking about with code in your back bedroom then you CAN get a copy of Rosan.Doc and a shareware PC-hosted cross assembler such as Tasm for a few dollars and you CAN write PcW programs but at about 1/4 to 1/5th the speed of what you could achieve with Psyq.

In theory, it wouldn't be *that* difficult for the authors of existing software to adapt their software to the PcW16 - the operating system provides a far richer set of calls than CP/M ever did. With one call you can display a dialogue on the screen complete with buttons, lists, scroll bars, etc, etc - for programmers it's far more like programming for the Windows API than the DOS Int 21 interface (which is kind of what the CP/M BDOS 5 interface presents).

The major stumbling block is the change in the screen from the weird and wonderful PCW screen that was designed especially for 8 x 8 character movements - it's raster scan actually went down an 8 by 8 grid and then to the top of the adjacent grid and so on to the end of a line and then down 8 raster lines to the next line of 8 x 8 cells. This meant that an 8 by 8 character from the single screen font could easily be blasted on screen with a single LDIR instruction. The screen for the PcW16 is far more like a VGA screen on a PC - 640 x 480 with a normal raster scan from the first dot at the left of the top line to the rightmost dot on that line and then so on down the lines on the screen. This screen layout is optimal for moving blocks of graphics which is effectively what the variable width/height characters in the multiple PcW16 fonts are. If we had kept the old 8 x 8 special mode it may have made the PcW16 as much as 50% slower than it is at present.

Because the PcW16 OS provides equivalent functions of virtually everything on offer from CP/M BDOS 5 interface, then tons more besides, it would be a relatively simple process for someone to write a CP/M emulator for the '16 but with the proviso that characters (even though fixed 8 x 8) will be slower to draw than on a previous PCW though the processor speed increase should cover the difference. This would not be unlike running a DOS box in Windows 95. Of course this would be fine for traditional old CP/M software that made no assumptions about the screen geometry (Loco's Mallard BASIC springs to mind) but the fact is that the majority of programs for the old PCW are NOT CP/M programs - they are PCW programs and just use CP/M for the simple things in life like filing and keyboard input but then get real groovy with the specific electronics of the PCW to display their output. Trying to emulate THAT on the PcW16 would be a far greater problem.

A half-way house would be to implement VT52 emulation which would probably be sufficient for the likes of SuperCalc, Cracker etc, but to run something as all fired whizzy as MicroDesign would require a total emulation of the whole PCW design - warts and all - and I think the only company that understand that in sufficient detail to do it would be Locomotive. Then there are the problems about the ownership of CP/M as I think the only way they could achieve it would be to implement true CP/M on the machine, not an emulation. (since this communication, Caldera have granted permission for CP/M to be freely distributed - BW)

The thing that is going to motivate anyone to write even the simplest CP/M emulator is whether they think they could make more money selling it than it would cost to write. Say it took a man year of (a programmer's) effort, that might cost £50,000.



How many must you sell to cover that? Assume you couldn't get away with charging more than £25. Of the £25 you *might* make £7.50 profit. You have to sell 6,666 copies to cover development costs before you get *near* making a profit. If there are 10,000 '16s out there that suggests 2/3rds of users would have to buy it. I doubt whether more than 10% would (most people just buy a PCW as a WP - if they wanted more they'd have bought a PC) so there is no way it would be commercially viable to do this. 'Course that doesn't stop someone writing it as a hobby project and if I had more free time I'd have a stab as it is one of those cute ideas that is intellectually fulfilling, but I doubt I could ever make any money out of it!

BW: OK. Conversion of Protext for the '16 is back on the agenda, and I AM resigned to the use of the development system. You made the case for its use very well!

CL: You won't regret it. I spoke to Nik at Creative and he says that you may be mistaken about thinking that you'd be tied to his marketing.

### ON USER SUPPORT AFTER PURCHASE

BW: Thank you for the response on the "leading page breaks" problem. I look forward to receiving my updated tester's disc.

CL: v1.11 went off to you today. I don't think it is *that* different from 1.04 - maybe you were just experiencing one of the things that *has* been fixed. As for sending out disks, I simply don't have the time to duplicate and send out 50 odd disks. The PcW16 is no longer my major concern in life and time on it detracts from the project I am currently working on which is so insanely complicated that every moment away from it could be vital. This is why I make the latest version available in a public place (my web page) so that for virtually zero effort I can point people who want 1.11 (or whatever) in its direction and leave them to it. I always have a downloadable copy of the latest OS and the latest FAQ document from the Rescue disc. Also there are details for developers of how to go about writing PcW16 software.

BW: (Words to the effect of, "Would it be in order to publicise the availability of the new OS version?")

CL: What we want to avoid is that suddenly everyone says, "My copy is older than 1.11 so Amstrad **MUST** send me the latest version" which might involve sending 10,000 disks at about £5 a time (£50,000), next time with 1.12 the number might be up to 12,000 (£60,000)... If this even happened once, then we'd probably have to stop selling the PcW16 as it would be eating away at the meagre profit we make. At least by posting it on my web page the onus is on the user to spend his own time and money downloading it, finding himself a blank floppy and doing the copy operation. As soon as one gets involved in sending disks out you are looking at about £5 per disk to cover the costs of disk, employee's time on duplication, etc, etc.

BW: Would there be any objection to me making copies available *free* to 8BIT readers? You said this is a problem you would rather not have to address so it would take the load off you. The owners I have as readers are non-internet/e-mail users who would probably appreciate Amstrad making the update freely available to them this way.

CL: I've no objection to it being available through you for those who want it and I guess the dedicated people who go to the length of subscribing to 8BIT are the ones with high usage who might be more likely to fall foul of one of the problems now fixed. But I don't want to start the impression amongst users that it is their **RIGHT** to keep getting the latest version from Amstrad, soon to be Betacom.

**IS THAT VERY CLEARLY UNDERSTOOD, READERS?** For authorised PcW16 O/S upgrades send a disc, a 1st class stamp and return label in a jiffy bag to 'UPGRADES' at 8BIT, or Cliff Lawson's WWW Home Page is at: <http://web.ukonline.co.uk/cliff.lawson/index.htm>



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## A GRIPE FROM A SPECTRUM USER WITH AN EPSON PRINTER: by Marion Butcher

My gripe with Epson (unless somebody stole the manual out of the box, but I don't think it *was* included) is that the printer was supplied without the Epson Reference Manual. The User's Guide *was* supplied however, with a list of ESC codes which the printer used. I couldn't believe that they gave no clue as to how they should be used; no parameters, no *nothing*, except for a cursory mention of the above Reference Manual.

As I wanted to use the Stylus for the Spectrum 128K +2A computer too, this was important to me, so I sent to Epson HQ who referred me to a retail outlet. I had already scoured the bookshops here in the Kent county town with no success, and PC World were *most* unhelpful: after all the printer was supplied with Windows discs, what more could anybody want? Reference Manual? Never heard of it!

Thanks to 8BIT's advertising columns, I was also able to obtain a ribbon cable to connect the printer to the Spectrum.

Using FORMAT LPRINT "U", followed by POKE 23419,12 (both at the beginning of the session), followed by (for each picture) LPRINT CHR\$(27);"r";CHR\$(anything from 0 to 6 in brackets); (that gives one of six colours, don't forget the semicolon) followed by COPY EXP or COPY EXP INVERSE, I am able to obtain monochrome screen dumps, in various shaded colour hues thanks to the User Manual.

Ordinary or inverse printing in two or three colours one after the other, passing the paper through the printer several times, give interesting effects. The million-dollar question is, how do I convert them to full colour?

At this point I decide that the User Manual is just too complicated, but I'm not running for Windows because I'm afraid I have more sense than money (very sad!) By the way, to get back to LLISTing programs, FORMAT LPRINT "E" first.

The POKE command, if you have a 14" screen, puts the picture to near enough actual screen size, although the shading is a bit "banded" vertically. At least circles become round! Surprisingly, the picture is printed sideways on, (unlike plain COPY which gives a most unsatisfactory result,) and the picture tends to be narrowed at the sides as Spectrum sets 23419 to 9 normally. Mind you, I got one picture three pages long whilst I was playing about with the ESC codes (chr\$(27))!!

PS by Brian Watson.

I can only echo and endorse Marion's comments. All the principal printer suppliers seem to find it a good little 'earner' to treat their printer codes and other useful information as if they were state secrets - only to be disclosed upon payment of *at least* the price of a premium rate call to a 'help line', and more usually a big fat fee for a manual. If you need any codes write to 8BIT; "Nudge, nudge, wink, wink. Know what I mean, squire?"

## A SHORT 'WANTS' LIST

A BOOKS SECTION has been requested by George Hudspith. Suggestions are invited to build a list of really helpful books, manuals (including technical "specials"). Can readers respond with the benefit of their experience.

Since taking over the republishing of the Pipeline Tutorials range, you editor has received a steady stream of requests for tutorials in 8BIT for one program or another, none of which would seem to be of sufficiently wide appeal to 8BIT's readers. However *all* suggestions are gratefully received.



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ON TRIAL: Z80 SPECTRUM EMULATOR V3.04 TO RUN ON A PC. Judge A.J.Davis presiding.

I have a duty to act legally and professionally. Failure to do so would set a bad example. I obey speed limits and register software. In this case the latest version of Z80. It's been years since v3.03 was released, and everyone was looking forward to what we thought would be version 4 and were expecting big things of it.

The shareware version of 3.04 is as disabled as 3.03, but also has a countdown timer at the beginning, saying that working functions will run for five minutes. What happens after, I don't know. I applaud Gerton Lunter if the program terminates as version 3 allows far too many to use it without bothering to register, especially if they only use it for playing game snapshots.

A week after I placed my £20 order with BG Services the emulator arrived. For the price it didn't look much. The emulator is on a 3½" unbranded HD disk with a simple label stating: "SPECTRUM EMULATOR 'Z80' by GA LUNTER Supplied by BG Services". Also enclosed were two sheets of A4 paper with a badly copied advert for BG and the emulator installations instructions. Brian Gaff printed a small apology at the top!

1346k used and nine files. One 248k file is the shareware version of v3.04, which won't be of personal use but will be in our emulator library. There are five PKZIP files containing everything which are all unpacked, thanks to the INSTALL command. There is source code files for the emulator and the utilities. Neither of these are needed to run the emulator, but are useful to look at. It then proceeded to install the utilities which allow +D disks to be read, file conversion, and much more.

It then unZIPped a number of ex-commercial games and utilities. Finally, Z80 itself was installed but, *almost* wasn't. There was a fault with the disk, but I managed to recover the file. I would recommend that in future, BG puts the essential files at the start of the disk, rather than at the high end, where most disk faults occur.

Time to modify the Z80.INI file! These 'INItialisation' files contain custom commands to run the program to your preferences. There are hundreds of options for setting Z80, which make it one of the most comprehensive custom orientated emulators. Its primary function is to let you choose which machine you wish to emulate at start-up, with what drive functions, locations to tape and snapshot files, and key control options.

This done, Z80 starts with a simple Z80<RETURN>. It gives details of the registered user and keeps track of unauthorised distribution, and tells you the speed it will run at. In my case, it runs at a comfortable 260% which roughly equates to the speed of the PC multiplied by 10. So you'll figure out that my PC is a 25Mhz model! On a 100Mhz machine the emulator runs at a blinding 1019%! Useless for Jet Set Willy, but ideal for strategy games! (I take it the speed is not adjustable? - BW)

The title screen shows 3.04 and runs like the older versions. The only visible difference is that all snapshots are listed in lower case - a better idea as it shows up directories better, but will take some getting used to. However, one of its best features - a pseudo 'search' facility has been removed. In the old version, if you were searching a large directory for the game JETSET (for Jet Set Willy), your directory would be listed in alphabetical order. All you had to type was J and it would move to the first file beginning with J. Then press E and it will move to the first file with the first two letters JE. Next press T and it's moved to the file with JET in its name. This feature has been removed from 3.04 making it more difficult to find your snapshots easily. I consider this a MAJOR drawback. It will move to the first letter - but any other keypresses are ignored.

What is a shame is that all menus have the standard horrible Sinclair font, enlarged to make it even worse! It would be nice if you could insert your own font. You can, but there's no direct route to doing so.



According to the version guide, quite a lot has been added. You don't notice them when using the emulator which, when they are bug fixes, is a good thing! Anything with a \* at the end signifies it's in the registered version only:

- 1) SLT file support. This structure allows you to put screen pictures and game levels into a single TAP file, meaning more multiloader games will work.
- 2) Improved keyboard handling and speed measuring in DOS boxes under Windows 95. Sadly the bug where the CAPS SHIFT isn't read properly when using the cursor keys hasn't been fixed. Spectrum +3 users with Tasword +3 will be familiar with this - you use the cursor keys and suddenly, numbers appear (5, 6, 7, or 8 depending on direction of cursor key pressed), totally spoiling your text.
- 3) An added utility to read VOC files from your PC's sound card and filter them. This means reliable tape loading from a sound card. \*
- 4) Good news - the Disciple bug which meant only one snapshot per formatted +D disk has been cured! The +D disk track buffer bug has also been fixed. \*
- 5) It now uses 16k less memory. If extended memory is present, it uses 240k less base memory making it possible to run Z80, quit to DOS and restart Z80 again!
- 6) A switch has been added to suppress the pause of the Z80 title screen. \*
- 7) Technical information has been added about the ZX printer, sound chip and 128k internals. But more could have been added. I Hope the DEFINITIVE 128K TECHNICAL MANUAL, being written by Alchemist Research, will be added to the next release.
- 8) Support for a second joystick has been added.
- 9) The emulator will return a report if output is sent to a printer which is off line or not there. Previously, the emulator used to hang.
- 10) Trace and op-code mapping features have been added. The latter in conjunction with Leslie Styles's DSNA utility.
- 11) Explanations of Break Points (used in machine code hacking) have been added by Douglas Paulley.
- 12) An improvement I found out some days later by accident was the addition to allow you to enter addresses in decimal in the "LOAD/SAVE SCREEN OR MEMORY BLOCK" function (F10, X, S/L). Before it would only allow hex addresses, so if you were importing a PC file, you'd first have to convert the decimal length to hex, usually with the Multiface. Now type in your values in decimal and conversion is done automatically! A big help when importing text files from PC disks.

#### SUMMING UP

A bit of a let down regarding it's advancement considering it's been almost two years since the last major advance. There could be more added to the package for more fun like extra ROM images. For the price, I would have liked better packaging.

Z80 is still a wonderful emulator, and will probably never be beaten. If you already have a registered v3.03 then you are entitled to a free copy of 3.04 if you send SAE and disk. If you're not registered, now is the time to. If you dislike the missing features from the shareware version, you'll feel that the investment is worth it.

Z80 3.04 Spectrum emulator Shareware demo: blank disk & SAE, full version: £15, full version with +D support : £20. Contact: Brian Gaff at BG SERVICES, 64, Roebuck Road, CHESSINGTON, Surrey KT9 1JX. Telephone: 0181 287 4180 or Fax: 0181 391 0744



## THE BASICS:

There are three basic items you will need to access the online world with a C64/128.

1) A modem. Actually a modulator and demodulator in one box, changing computer signals into those that can be carried by a telephone connection (be it cable, satellite or plain old wire). A modem is either acoustic (the telephone handset is placed on a coupling and noises are played down the wire) or they come with a cable and jack to plug into the actual telephone socket. The latter are more reliable.

The next important thing is speed. This is rated either as Kbps (kilobytes per second) or using the older baud standard (in characters per second, so 1200 baud roughly equates to 1Kbps). You will also need an interface - C64 users can go for the SwiftLink or Aprrotek interface or RS232 interface to attach PC modems that can reach higher speeds.

2) A phone line. As mentioned, most modems require you to connect them directly to a telephone socket. If you have a cable telephone system in your area, ask about getting a second line installed for your modem and/or fax machine. Cable lines are fibre optic resulting in good quality connections with less interference and noise that leads to errors. You also need to be aware that *you are paying for every second you are 'on-line'*. Most calls can now be at local rates. (Again, cable lines can be preferable if they are cheaper than BT - and does BW know that BT are using scare tactics to get people to avoid signing up with cable companies? No, do tell - BW).

3) Software. What you will need is called comms or terminal software which tells your computer how to communicate via the modem and understand what it receives. Usually the more you spend, the better. Among the best programs for the '64 is Novaterm, sometimes offered with a 1200 baud Commodore modem (no interface required) for C64/128 users at just £20.

## A SAMPLE SESSION:

Assume you have connected and installed your modem and its software according to the instructions and it is ready to use. What now? Find a number to call and learn how to set up your modem for the call. Most bulletin boards (or BBs as they are known) require you set your modem for 8N1 - 8 data bits, no stop bit, even parity - (for error checking). Not too technical for a beginners' piece? If not, don't worry. Set the settings and trust the software!

Now you can dial a number. Most modems use a similar technique. Enter AT to check the modem is listening (AT is the command for the ATtention of the modem). Now type ATDTxxxxxxxxxx, where x's are the number you wish to dial (don't type the spaces; for example 01353777006) and the T at the end of ATDT is for tone dialling; if you are at older exchange try changing the T to P for the older pulse-dialling system.

You should now see something appear on the screen. If you get garbage, you failed to make a connection or your modem is not set up correctly.

## USING A BULLETIN BOARD SYSTEM

Most systems start with either a message or jump to a prompt asking for your name and password. Watch the messages as they will tell you what to do if this is your first time - you may have to log on using a 'guest account' until you register.

Having negotiated the password entry, you will probably be given a list of options or even just a simple prompt. Try typing ?, H (for help), or L (for list). One of those should bring up more information on what you are doing.



Most bulletin board systems offer basic options like posting mail to other users or reading mail sent to you. There may also be message areas (or sub-boards) for messages on a particular topic. With most modem software you can capture and save incoming text and read it off-line - a good way of limiting your phone bill, and you can choose to phone when calls are cheaper.

One of the most exciting aspects is software. You can download software (get the BBS to send you something) or upload (send something to the BBS for other users). The key here is to use the right protocol.

A protocol is simply a set of instructions that tell the carrier and your computer how to communicate when transmitting huge amounts of data (that's information in plain English). Examples are Punter (designed for Commodore users), X-modem, Z-modem, etc. They all include error-checking so if you get a bad line or lose the connection, blocks of the program will be re-transmitted so you get a complete, and therefore working, copy.

### ACCESSING THE INTERNET

As mentioned in earlier issues of 8BIT, it is possible for 8-bit machines to access the Internet to a greater or lesser extent. You can send and receive E-mail, use ftp (file transfer protocol) sites to get software and even use a text browser to 'look' at World Wide Web sites (the much-hyped multimedia areas with sound, graphics and linked text). With your text browser, instead of clicking on pictures and words, everything is numbered. Type the number next to an IMAGE statement and it will download the picture. You can also jump to other sections and other Web pages by typing a number next to one of the link words.

For the real Internet, with all this graphics related material there, even if your Commodore cannot fully utilise it, a faster modem is a must, but check your computer type's own specialist press for the maximum speed it can reliably handle. Even the fastest modem is slowed down by bad connections and the increasing large number of people (well over 30 million according to some) who use the Internet. You will then need an account with a Service Provider - for example Pipex, Demon, Cix or Compuserve. You will pay a flat fee per month plus there may be extra optional charges for additional services.

Compuserve is a reasonable bet for 8-bit users. Not only do you get access to the Internet, but Compuserve itself has hundreds of topics and file areas dedicated to the 8-bit machines. And since Compuserve is a world-wide network, you may make friends with someone in another country. The great thing about Compuserve is the flexibility. You can now use two speeds of link - 1200 and 9600 baud. Compuserve can be contacted on 0800 289458.

There are other things to consider. If you might buy a PC why spend extra on another modem? For most 8-bit computers you can buy an external PC modem and hook it up with an interface cable - for example SwiftLink which allows transfer speeds of up to 38.8k per second. New modems are tending to leave the 8-bits behind in terms of speed.

There are many modems on the market now that offer fax software. Basically, a new set of protocols has been designed for transmitting fax signals. With the right software and modem, a Commodore 64 can send and receive faxes. This exciting development, since it works under the very useful GEOS environment. So you could use a real fax machine as a high-density scanner to get images into your computer, or send faxes to companies worldwide via your Internet Service Provider.

I hope you have enjoyed this brief introduction into using comms software from a Commodore C64/128 user's point of view. Look out for more articles on the subject in future issues of 8BIT.



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## 8BIT MAGAZINE - HOW IT ALL STARTED by Brian Watson

I had been a user of an expanded Amstrad CPC 6128 (and later a CPC 6128 Plus as well) with CP/M Protext (as also used on the PCW) as the principal program and other lesser programs for my business and home purposes for seven years or so. Before I bought it, I had taken about three months of virtually all the computer magazines from our local newsagent to decide which make and model would suit my purposes best. In these days pre-PC, this was not too expensive as a means of research. Nowadays the number of PC magazines would certainly not, I fear, result in a useful consensus on which to base a decision.

Then I became aware during May/June 1995 that there were far fewer sources available for my computer supplies, including 3" discs and so on, than there had been only a year previously. With the loss years before of Computing with the Amstrads, the more recent demise of another CPC news stand magazine (CPC Attack) and the apparent ill-health of the other (Amstrad Action) which seemed to be heading for terminal decline, it seemed that if we CPC users were to stay in touch for mutual support *someone* had better do something positive about it, and quickly. My background is sales, management, and various forms of (self?) promotion, including writing scripts and articles for money, so it was not unreasonable to assume I could tackle the job with a reasonable hope of success.

Having taken the PCW magazines for their CP/M and Protext coverage for several years I had begun to detect the first signs of 'shrinkage' forming there, and that sparked the idea in me that there was a common interest which might extend to other similar computer users, including Sinclair Spectrums (later versions of which also use 3" discs), and Commodore C64s, the games for which were often also produced in CPC and Spectrum versions in more buoyant times.

These, then, were the 'Big Four' types of computers; on any other makes and models I knew I was nowhere near as knowledgeable. I had taken the European magazine Elektor for several years back when home computing meant building your own and success was measured by the fact that a sequence of lights lit as predicted. I remembered seeing the 'BBC' micros too from an early television series on home computing meant to inspire the masses but I hadn't seen much of them since, apart from some battered ones in our local primary school.

I remembered the launch of the QL, but that seemed to have sunk without trace, and the big noise in the national press surrounding the release of the SAM too, its demise, first rescue, and apparent second (final?) demise. So with a background fairly rich in ignorance, the tricky thing would be to do a good enough job that it would convince users of all the other similar computers that there was more to unite than divide them. I already knew from the content of some of the various 8-bit newsstand magazines that *some* owners were very partisan in their computer allegiance.

By doing research into the others I came across the fact that the common factor, regardless of any other differences, was the fact that *my* generation of computers all had an 8 bit main processor chip. Not necessarily the *same* chip, but the same general information-shifting method. So *that* inspired the key word in the name of my proposed magazine; an 8 bit club, or whatever it was to be. In the early stages I considered them all, and at one time even considered opening a shop to act as a central physical presence to the project. Eventually, however, common sense prevailed and I felt that if there was to be a central forum launched for all 8 bit computers it needed to be in the form of a magazine and also it would have to be:

- (1) on A4 paper, for maximum accessibility and legibility by readers
- (2) punctual and regular, and ideally published monthly, although this seemed from the outset that it might be hard to maintain



- (3) reasonably priced, with a discount encouragement for subscribers
- (4) primarily serious, as opposed to frivolous, but not stuffy or boring
- (5) advertising centred, as opposed to article centred, as the potential lack of supplies was *my* main concern and I assumed it would be others' too
- (6) it should include the offer of a free 50 word small advertisement for subscribers

Accordingly, I initially settled upon the name **8BIT MART** for the proposed magazine to use my key word '8 bit' in a distinctive way and communicate the advertising side through the word 'MART' (in capitals). I then spent A FORTUNE on canvassing clubs, magazines, suppliers and potential advertisers via the surviving 8-bit computer magazines with my dummy issue to spread the word that the first real issue would be published on the 1st September 1995. I think a lot of people underestimate the value and expense of effective advertising and public relations in home publishing which needs to be maintained even after the launch period. I had obviously struck a good note, for issue 1 of **8BIT Mart** was shipped on time and the response was very positive indeed with what I thought then was a good initial subscription by about 100 people.

The name changed to **8BIT** from issue 4, the 'MART' having gone to lower case then completely disappeared. Advertising was not perceived by others as the urgent need that I had felt it to be, and many of the 'display' advertisers from the early issues have now fallen away. I do wonder how they now publicise their wares and services, but that is a matter for them. Also only a very small percentage of the readership use the 'free small advert' offer, though I cannot see me discontinuing it or putting on a charge. I originally printed the small advertisements pages myself on loose sheets so that they (1) were cheaper to produce than photocopying (2) could be updated closer to press date and (3) could be dumped by readers after the relevant adverts have been followed up by subscribers without damaging the editorial content of the magazine. This was not the way the readers saw it, so I responded to comments by incorporating them properly into the body of the magazine.

Now a few years have passed, and feedback from the current 750+ readers has endorsed my belief in the project overall, but pressure on my time has since resulted in going to a bi-monthly schedule, later a quarterly one. Each increase in the interval between issues has brought some criticism, mainly from other editors but also from some readers. I am not insensitive to this but, believe it or not, I have a life, and **8BIT** has never been run as a big "earner". Taking into account the cost of my time spent on it, it is only just profitable. OK, I *don't* work cheap!

I spend a great deal of time proof-reading and checking the spelling and grammar. I am neither perfect nor pedantic, but I do care about getting things right, and I will continue to make changes for the sake of improvement until **8BIT** finishes with issue 25. If you had been with the magazine since the start I hope you would agree the production values have steadily improved.

I am pleased to hear from many of the readers that by providing a magazine concentrating on cross-format issues **8BIT** is still helping to keep the 8-bit computer scene alive and lively without 'poaching' on the territory of existing computer-specific magazines. Amstrad Action, Commodore Format and PCW Plus have all gone during **8BIT's** run and many of their readers have chosen to take **8BIT** as well as another magazine specifically for their computer.

The space devoted in **8BIT** to one or another of the 8-bit computers *still* tends to fluctuate from issue to issue but I intend most of the content to be of interest, whichever computer(s) you use with most of the magazine devoted to general issues relevant to all 8-bit computer users.



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**DISCLAIMER:** All contents of **8BIT** are published on the basis that they are opinion or believed true at the time of publication. I'm doing my best, but no liability can be accepted by Brian Watson or contributors for any loss or damage, distress or upset, however caused. I am careful to try to supply a realistic value to any hunch, belief, opinion, rumour or fact but clangers can still happen. So, "Sorry if I get something wrong, please tell me if/when it happens so that I can set the record straight."

**THE REAL WORLD:** Pressures on my time of family, business, hobbies and deadlines mean individual replies to letters cannot be guaranteed, promptly or at all. I'm not (I hope) rude, I'm just a very busy person.

**CONFIDENTIALITY:** Details of **8BIT**'s subscribers will not be divulged without their express, or strongly implied, permission.

**LOW-COST REPAIRS:** There is a thriving network of low-cost repairers for small jobs on older computers such as replacing drive belts or drives (keeping old parts for spares). With supplies of older kit (especially peripherals) dwindling, it can be cheaper to replace an item than have it repaired, resulting in *working* parts of the failed item being lost when it goes in the bin. To minimise costs, especially on larger items, I am prepared to offer a free courier service throughout East Anglia, the East Midlands, and London. **8BIT**, especially the **MISCELLANEOUS** and **SMALL WORKS** sections, are the best places for appeals for (or offers of) help finding a low-cost solution. I assume permission to publish is implied with any letter received unless otherwise stated.

**COMING AT THE BEGINNING OF OCTOBER:** A 'writers special' edition of **8BIT**, with **The Big Feature** on how to get your work published and, more important perhaps, get paid for it. Plus all the stuff which I didn't have space for this issue. Copy date for that **8BIT** is 15th September 1997, with publication at the beginning of October 1997. The publication date may be brought forward to avoid clashing with the editor's holiday dates, so please submit all copy sooner rather than later.

**EVEN FURTHER UP THE PIPE:** Future **Big Features** are already planned, and in preparation, on Spreadsheets, The Great Games, Genealogy, and more. Plus, it is hoped, someone will offer an article on the mighty Spectrum in the "I've got a ... now what can I do with it?" occasional series. It needs to be reasonably well-written, and cover the differences and range of possible uses of the various models in the series, together with software and peripherals a new owner really should consider looking out for.

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## The Great British Word Processor!

**Protext** is the fastest and most complete word processor on the Amstrad PCW. It also happens to be the best value word processor on the Amstrad CPC too. **Protext** is used to produce most of **8BIT**. On one disc, the program features include:

- logical keystrokes
- "plain English" commands
- free tutor file on disc
- fast text handling
- simple Network, MicroDesign and LocoScript compatibility
- mail-merging and spell-checking *at no extra cost*
- *free printer support for any printer*; use your printer's built-in fonts or colour capability without any additional expense
- *free* user support is included in the purchase price, and the **Protext** helpline operates at normal telephone rates
- **Protext** handles printing in columns and colour with ease
- simply configured for more advanced purposes
- **Protext** can easily produce ASCII files for transfer the text between computers, either by software or by e-mail
- the *free* **Protext** Users' Club is available to all **Protext** users for the open exchange of tips, templates, and information

**Protext** has had 12 years continuous development. Above all, **Protext** remains fast and very easy to use. The user-friendly 'look and feel' of the program has been maintained throughout it's development. It is impossible to cover everything here. For further information on **Protext** *and many other items for users of CPCs and PCWs*, send an A4 SAE to *Harrowden*, 39, High Street, Sutton-in-the-Isle, ELY, Cambs CB6 2RA. **CP/M Protext**, the 'one-disc' word processing solution, costs just £25 (including p&p) from **ComSoft**, 10 McIntosh Court, Wellpark, GLASGOW G31 2HW. Orders may be placed by phone on 0141 554 4735 or 01353 777006 quoting credit card details, the computer model, and the drive A: size when ordering.